INSTRUCTIONS

-J03107 REV. 2008-12-17

REAR TURN SIGNAL RELOCATION KIT

GENERAL

Kit Number

68732-02A, 68733-02A

Models

This kit is needed to complete the installation of certain saddlebags on specific FXD (Dyna®) and XL (Sportster®) motorcycles.

For model fitment information and affected saddlebag part numbers, see the P&A retail catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

NOTE

This kit may be installed without saddlebags, but this will result in open holes in the fender support covers. The following hole plugs are available from a Harley-Davidson dealer:

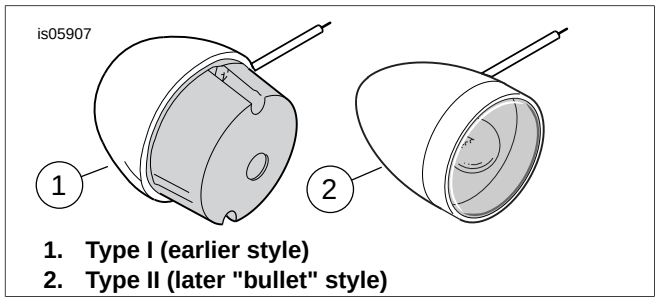
- *Part number 56239-93, for 0.375 inch (9.5 mm) diameter holes on FXD models.*
- *Part number 68446-00, for 0.344 inch (8.7) diameter holes on XL models.*
- *Part number 53377-04, for 0.400 inch (10.2) diameter holes on XL models.*

Additional Parts Required

See Figure 1. Models with earlier style turn signals will require the following items, available from a Harley-Davidson dealer:

- Two hole plugs (H-D Part Number 58765-85)
- Two electrical cables (H-D Part Number 32692-70)
- Two acorn nuts (H-D Part Number 7787)
- One piece of shrink tube (H-D Part Number 67113-83)
- One connector (H-D Part Number 70581-73)
- One small diameter conduit (H-D Part Number 70530-89)
- One large diameter conduit (H-D Part Number 70552-70)
- One cable strap (H-D Part Number 10065)
- **1988 and later:** Two socket head screws (H-D Part Number 861a)

  1987 and earlier: Two hex head screws (H-D Part Number 3945)



1. Type I (earlier style)
2. Type II (later "bullet" style)

Figure 1. Turn Signal Types

Tools and Supplies Required

A Packard Crimping Tool (HD-38125-8) is required for the proper installation of this kit.

An UltraTorch UT-100 (HD-39969), Robinair Heat Gun (HD-25070) with Heatshrink Attachment (HD-41183), or other suitable radiant heating device is also required.

Loctite® 243 Threadlocker and Sealant - Blue (H-D Part Number 99642-97) is required for the proper installation of this kit.

⚠WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references service manual information. A service manual for your year and model motorcycle is required for this installation and is available from a Harley-Davidson dealer.

Kit Contents

See Figure 7 and Table 1.

PREPARATION

Models with main fuse:

⚠WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove main fuse before proceeding. (00251b)

1. Refer to the service manual and follow the instructions given to remove the main fuse.

Models with main circuit breaker:

⚠WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding. (00048a)

1. Refer to the service manual and follow the instructions given to remove the seat and disconnect the negative (black) battery cable from the negative (-) battery terminal. Retain all seat mounting hardware.

NOTE

*For 2004 and later XL (Sportster) models, the negative battery cable is most easily disconnected **at the engine crankcase**.*

TURN SIGNAL REMOVAL AND DISASSEMBLY

Remove the two screws and tail lamp lens from the tail lamp base.

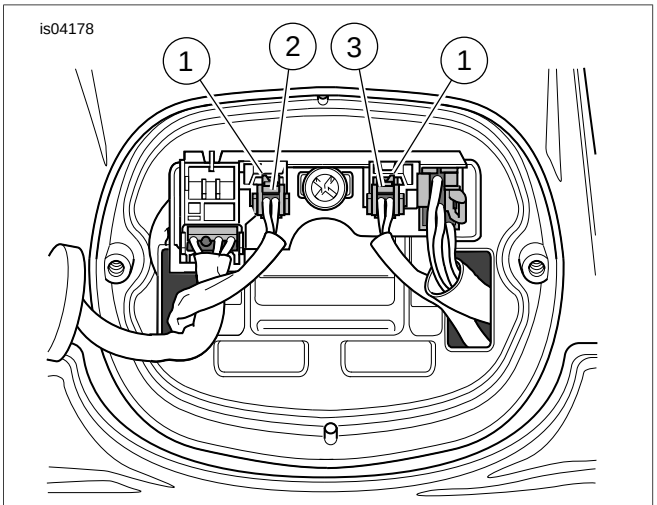
Determine if this vehicle has a rear lighting circuit board

If YES, continue below.

If NO, proceed to **Models without Rear Lighting Circuit Board**.

Models with Rear Lighting Circuit Board

1. See Figure 2. Depress the lock tabs (1) on the left (2) and right (3) two-way turn signal socket housings ([18B] and [19B]) to disconnect them from the rear lighting circuit board.



1. **Lock tab (2)**
2. **Left turn signal connector**
3. **Right turn signal connector**

Figure 2. Turn Signal Connections

2. Push the turn signal socket housings and wires through the openings on each side of the tail lamp base.
3. Reach under the fender and locate the fender clips that hold the turn signal wires in place.

   Carefully pull the wires out of the clips, and pull the turn signal connectors and wires out from under the fender.

NOTE

The wires must be cut to fit through the new turn signal bar. Remove the black conduit to allow splicing and stagger the cuts as shown in Figure 3 so the conduit will fit over the sealed connectors after the wires are spliced back together.

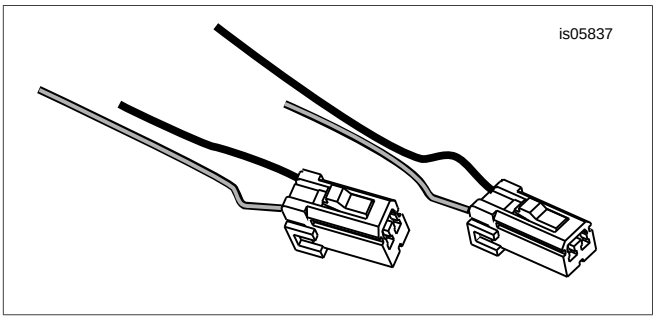
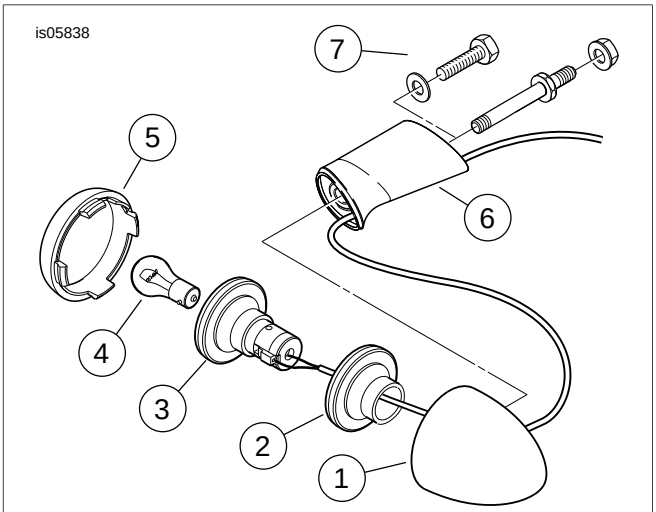


Figure 3. Cut Wire Ends with Connector

4. See Figure 3. Cut the black (BK) and brown (BN) wires approximately 4-6 inches (10-15 cm) from the right turn signal socket housing [18B], staggered as shown. Cut the black (BK) and violet (V) wires of the left turn signal socket housing [19B] in the same manner. Save the cut wire ends with the connectors.
5. Remove the turn signal assemblies and supports per the instructions in the service manual.
6. See Figure 4. Remove the lens (5) from one of the rear turn signal housings (1).



1. **Turn signal housing**
2. **Grommet**
3. **Reflector**
4. **Bulb**
5. **Lens**
6. **Support**
7. **Fasteners (vary per model)**

Figure 4. Rear Turn Signal (Typical)

7. Carefully pry the reflector (3) and grommet (2) from the housing (1). Gently pull the wires out from the unthreaded housing hole.
8. Remove the support (6) and fasteners.
9. Repeat for the opposite turn signal, then proceed to **License Plate Bracket Removal**.

Models without Rear Lighting Circuit Board

1. Remove one of the rear turn signal lamp assemblies. See the service manual. Cut the wire approximately two inches

(50 mm) from the turn signal. Label the wire on the motorcycle wiring harness "right" or "left" as appropriate. Repeat for the opposite turn signal lamp assembly.

Discard the original turn signal mounting nuts, but save the turn signal lamps, flat washers and lock washers.

2. See Figure 7. Place one of the flat washers from the previous step on a **new** screw (purchased separately). Insert the screw through the attaching hole in the fender and the fender support.

   Place one of the original lockwashers on the fastener threads, and apply a few drops of Loctite 243 - Blue to the threads. Secure the fender support to the rear fender with a **new** acorn nut (purchased separately). Tighten the fasteners to 12-18 ft-lbs (16.3-24.4 Nm).

   Repeat for the opposite side.

3. Remove the mounting stud from the turn signal lamp assembly, and discard the stud.

4. Remove the turn signal lens from the lamp assembly. Remove the wire and grommet from their original position in the turn signal lamp body.

   Insert a **new** hole plug (purchased separately) into the vacated hole in the turn signal lamp body from the inside, so the small end of the plug is outside the lamp body. Assemble the lamp.

5. Repeat for the opposite turn signal, then proceed to **License Plate Bracket Removal**.

LICENSE PLATE BRACKET REMOVAL

Note the parts and orientation of the original equipment (OE) license plate bracket components.

Remove the license plate bracket assembly from the fender. See Figure 7. Retain the hardware (E) for installation of the new bracket (2) from **this** kit.

TURN SIGNAL BAR ASSEMBLY AND WIRING

See Figure 1 for turn signal identification.

With Type II "Bullet Style" Turn Signal

1. See Figure 5. Install a chrome jam nut (5) onto each end of the turn signal bar (6) with the counterbored side of the nut against the bar.

2. Route the turn signal wires as follows:

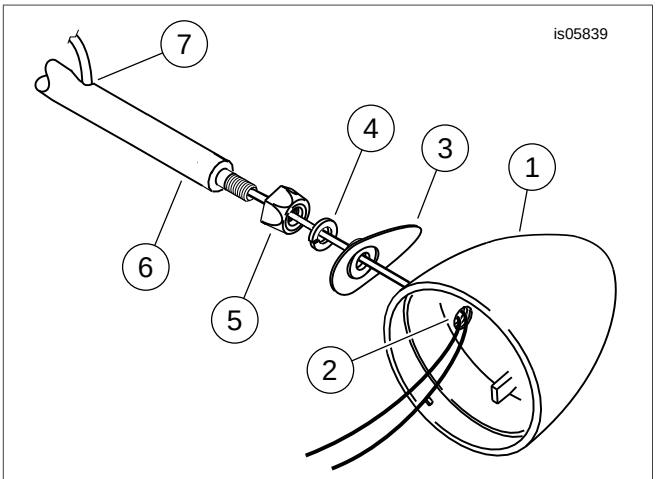
   a. Into the turn signal housing (1) and through the **threaded** hole (2).

   b. Through the recess cover plate (3).

   c. Through the **new** lockwasher (4).

   d. Through the chrome jam nut and into the hole in the end of the turn signal bar.

   e. Out the hole (7) a short distance from the end of the bar.



1. Turn signal housing
2. Threaded hole
3. Recess cover plate
4. Lockwasher
5. Chrome jam nut
6. Turn signal bar
7. Hole

Figure 5. Turn Signal Bar

3. Continue pulling the turn signal wires through the hole (7), while guiding the turn signal reflector (Figure 4, item 3) and grommet (2) into the turn signal housing.

4. Screw the turn signal housing (1) onto the threaded end of the turn signal bar, being careful not to twist the wires. Leave the turn signal housing loosely fastened to the bar.

5. Install the bulb (4) and lens (5).

   If desired, mark the new end of the turn signal wire lead "right" or "left" as appropriate. The right turn signal has black (BK) and brown (BN) wires. The left turn signal has black (BK) and violet (V) wires.

6. Repeat for the opposite turn signal at the other end of the bar.

With Type I Turn Signal

1. See Figure 7. Obtain the directional bar (1) and two jam nuts (5) from the kit. Screw a jam nut all the way onto each end of the directional bar with the counterbored side of the nut against the bar.

2. Obtain the two vinyl-covered electrical cables (H-D Part Number 32692-70, purchased separately). Push one cable through each end of the directional bar to exit the bar at the nearest slot.

3. Place a piece of shrink tube (H-D Part Number 67113-83, purchased separately) onto the turn signal lead. Splice the wire lead from the turn signal to the lead from the threaded end of the directional bar with a connector (H-D Part Number 70581-73, also purchased separately). Position the shrink tube over the connector and heat with a flame or heat gun to seal the connection.

4. Thread the turn signal lamp all the way onto the directional bar but do not tighten. Mark the new end of the turn signal wire lead "right" or "left" as appropriate. Repeat for the opposite side.

5. Encase the wire from the right-side turn signal lamp in small diameter conduit (H-D Part Number 70530-89, purchased separately) so the conduit begins inside the directional bar, just past the slot. Route the wire to the left side to join the left directional lead, and trim the conduit (NOT the wire) approximately 2 inches (50 mm) past that point.

6. Use the cut off piece of small diameter conduit to encase the left-side turn signal lead. Begin the conduit inside the directional bar, just past the slot. Trim the conduit (NOT the wire) approximately 2 inches (50 mm) past the point where it joins the right-side turn signal lead.

7. Encase the wires from both turn signals in large diameter conduit (H-D Part Number 70552-70, purchased separately) so the larger conduit overlays the two ends of the smaller conduit by approximately 1/4-1/2 inch (6-13 mm).

   Position a cable strap (H-D Part Number 10065, purchased separately) at this point, tightening it around the larger conduit to hold the wires and smaller conduit in place.

8. Remove the three 1/4-20 Phillips screws and hex nuts that attach the license plate support bracket to the fender. Save one screw, but discard the remaining fasteners. Remove the entire license plate bracket assembly and set aside for later assembly.

TURN SIGNAL BAR AND LICENSE PLATE BRACKET INSTALLATION

1. See Figure 6.

   For models with THREE license bracket holes in the fender:

   a. Place a piece of masking tape on the rear fender (3) in the area to the left of the three license plate bracket mounting holes above the tail lamp.

   b. Measure from the left lower hole (4), per dimensions (6) and (7), and mark the location for hole (5) on the tape.

   c. Place the new pad (1) from the kit onto the fender, aligning the holes with the three holes in the fender. Make sure the pad will cover a 3/8-inch (10 mm) diameter hole in the marked location.

   d. Mark the hole position with a center punch. Place a wooden block between the rear tire and the underside of the fender.

      Drill a 1/8-inch (3 mm) pilot hole through the tape and fender, followed by a 3/8-inch (10 mm) diameter hole.

   e. Remove the wooden block, and the tape. Clean the fender of tape and drilling residue.

   f. Place the pad (1) onto the fender, aligning the holes with the three holes in the fender.

   g. Mark the location on the pad that aligns with the new hole in the fender.

   For models with FOUR license bracket holes in the fender:

   a. Place the new pad (1) from the kit onto the fender, aligning the holes with the three holes in the fender.

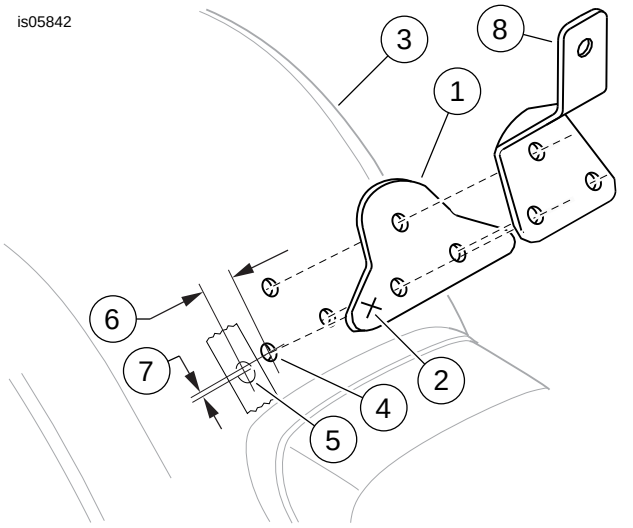
   b. Mark the location on the pad that aligns with the new hole in the fender.

2. **ALL models:**Remove the pad from the fender, and cut an "X" pattern (2) at the mark as shown.

3. See Figure 7. Obtain the **new** license plate bracket (2) from the kit. Route the wires for both turn signals through the leftmost hole in the license plate bracket, the "X" cut in the pad, and the leftmost hole in the fender.

4. Place the pad (4) onto the fender, aligning the holes and "X" cut with the four holes in the fender.

   Place the original license plate support bracket (G) onto the pad, and fasten to the fender **through the top hole only** with original fasteners (E) removed earlier.



1. License plate bracket mounting pad
2. "X" cut in pad
3. Rear fender
4. Leftmost support bracket mounting hole
5. Wiring hole location
6. Measure about 0.76 inch (19.4 mm) to left
7. Measure about 0.30 inch (7.6 mm) down
8. Original license plate support bracket

Figure 6. License Plate Support Bracket and Pad

NOTE

The right turn signal has black (BK) and brown (BN) wires. The left turn signal has black (BK) and violet (V) wires.

5. Insert the threaded studs on the turn signal bar (1) through the two holes in the **new** license plate bracket (2), the original license plate support bracket (G), the pad (4) and the fender.

   Fasten the studs to the fender with the original fasteners (E) removed earlier.

NOTE

*Ambient temperature should be **at least** 60 °F (16 °C) for proper adhesion of the reflector to the license plate bracket.*

6. Clean the license plate bracket surface with isopropyl alcohol, and allow to dry thoroughly.

   Peel the liner from the back of the **new** red reflector (3), and apply the reflector to the license plate bracket. Press the reflector firmly to the bracket and hold for about one minute.

7. **Models with rear lighting circuit board:** Slide a conduit (10) from the kit over each pair of turn signal wires. Push

the conduit through the wire hole in the fender, pad and bracket, and back into the holes in the turn signal bar.

8. **ALL models:** Rotate the turn signals so that they are horizontal and pointed to the rear. Tighten the chrome jam nuts so the turn signals will not loosen and rotate out of alignment during vehicle operation.

WIRE SPLICING

Splicing of wire leads is necessary in the installation of the Rear Turn Signal Relocation Kit to the motorcycle. Refer to the service manual for proper wire splicing procedures.

NOTES

Remove excess length from the turn signal wires before splicing.

Stagger the sealed connectors so the conduit will fit over the wires.

Trim the conduit slightly longer to allow the excess to cover the splice connections.

Models WITH Rear Lighting Circuit Board

1. Crimp the brown (BN) wire from the right turn signal lamp (A) and the brown (BN) wire from the two-way turn signal socket housing (B) cut off earlier into the ends of one of the sealed splice connectors (8) from the kit.

   Crimp the black (BK) wires from the lamp and socket housing into the ends of another sealed splice connector.

2. Crimp the violet (V) wire from the left turn signal lamp (C) and the violet (V) wire from the remaining two-way turn signal socket housing (D) cut off earlier into the ends of a third sealed splice connector.

   Crimp the black (BK) wires from the lamp and socket housing into the ends of the remaining sealed splice connector.

Models WITHOUT Rear Lighting Circuit Board

1. Locate the original turn signal wiring on the motorcycle wiring harness.

2. Trim the turn signal wires to the necessary length to allow splicing to the original wires on the motorcycle.

3. Slide a conduit (10) from the kit over each pair of turn signal wires. Push the conduit through the wire hole in the fender, pad and bracket, and back into the holes in the turn signal bar.

4. Splice the wire from one turn signal lamp to the corresponding wire on the motorcycle with a sealed splice connector (8) from the kit. Repeat for the remaining turn signal wires.

ALL models:

⚠WARNING

Be sure to follow manufacturer's instructions when using the UltraTorch UT-100 or any other radiant heating device. Failure to follow manufacturer's instructions can cause a fire, which could result in death or serious injury. (00335a)

- Avoid directing heat toward any fuel system component. Extreme heat can cause fuel ignition/explosion resulting in death or serious injury.
- Avoid directing heat toward any electrical system component other than the connectors on which heat shrink work is being performed.
- Always keep hands away from tool tip area and heat shrink attachment.

5. Use a heat gun or suitable radiant-heating device to apply heat from the center of the crimp out to each end until the sealant comes out of both ends.

WIRE ROUTING AND CONNECTION

NOTE

*Ambient temperature should be **at least** 60 °F (16 °C) for proper adhesion of the clips to the fender.*

1. Clean the inside of the fender surface with isopropyl alcohol. Peel the liner from the adhesive-backed clips (9), and position the clips so as not to make contact with the tire when riding. Press the wire clips to the fender.

NOTE

Make sure the turn signal wiring leads are not loose or bunched and are secured to the harness clips on the underside of the fender.

2. **Models with rear lighting circuit board:** Route the turn signal socket housings through the openings in the fender and tail lamp base, and plug the left housing [18] and the right housing [19] into the correct receptacle of the rear lighting circuit board.

3. **ALL models:** Secure the wires to the wire clips, making sure that the wires are taut and will not drag on the tire.

RETURN TO SERVICE

1. Verify that the ignition/key switch is turned to the OFF position.

   Models with main fuse: Refer to the service manual and follow the instructions given to install the main fuse.

   Models with main circuit breaker: Apply a light coat of Harley-Davidson electrical contact lubricant (H-D Part Number 99861-02), petroleum jelly or corrosion retardant material to the negative battery terminal. Refer to the service manual and follow the instructions given to attach the negative battery cable.

2. Turn the ignition/key switch to IGNITION/IGN, but do not start the motorcycle. Test the turn signals for proper operation.

3. Install the tail lamp lens to the tail lamp base with the two screws removed earlier.

⚠WARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

4. Refer to the service manual, and follow instructions to install the seat.

SERVICE PARTS

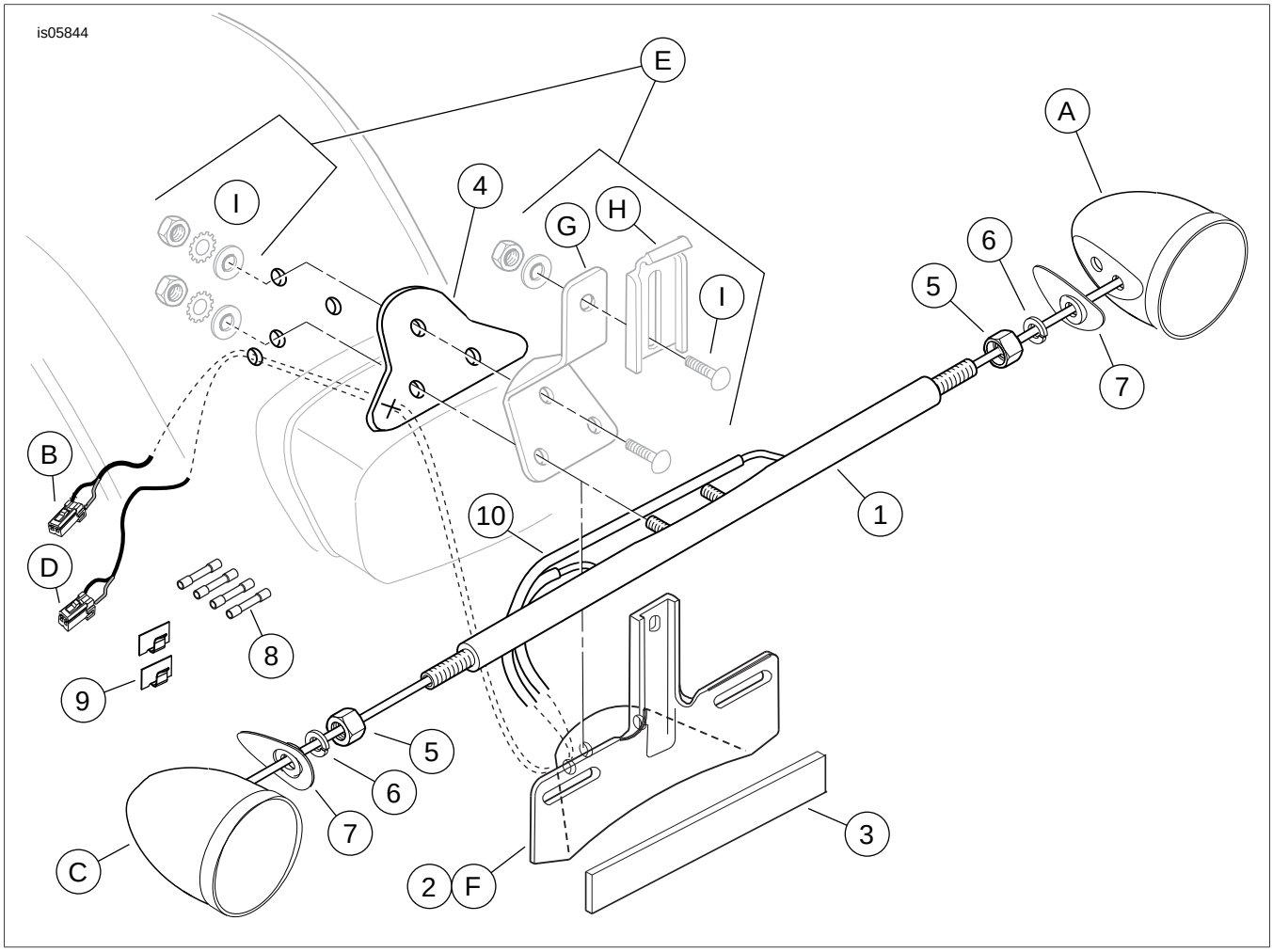


Figure 7. Service Parts, Rear Turn Signal Relocation Kit

SERVICE PARTS

Table 1. Service Parts Table

Kit	Item	Description (Quantity)	Part Number
Rear Turn Signal Relocation Kit 68732-02A (Domestic)	1	Turn signal bar assembly	68967-04
Rear Turn Signal Relocation Kit 68733-02A (HDI)	1	Turn signal bar assembly	68965-04
Items common to BOTH kits	2	Bracket, license plate	60013-02
	3	Reflector, red	59988-72A
	4	Pad, rear turn signal bar mounting	68456-89
	5	Hex jam nut, 5/16-18 (2)	7849
	6	Lockwasher, 5/16 (2)	7042
	7	Cover, turn signal recess, chrome (2)	68028-03
	8	Connector, sealed splice, red (4)	70585-93
	9	Clip, adhesive-backed (2)	10102
	10	Wire conduit (2)	Not sold separately
Items mentioned in text, but not included in kit:			
	A	Turn signal, right rear (brown and black wires). Includes item B	
	B	• Two-way socket housing, with brown and black wires	
	C	Turn signal, left rear (violet and black wires). Includes item D	
	D	• Two-way socket housing, with violet and black wires	
	E	Original equipment (OE) license plate bracket components	
	F	• OE license plate bracket (can be discarded)	
	G	• OE license plate mounting bracket	
	H	• OE license plate clamp	
	I	• Fasteners (vary per model)	